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CLINICAL MEDICINE

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VOLUME 52 NUMBER 11

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VOLUME 52 NOVEMBER, 1945 NUMBER 11

Clinical and Epidemiologic Notes on Undulant Fever (Brucellosis)

By C. G. BAKER, M.D., *Lexington, Kentucky*

UNDULANT fever: A specific, febrile, septicemic infection is caused by a member of the brucella group of microorganisms. Fever, sweating, body aches, and variable prostration are common.

Etiologic agent: A minute, non-motile gram negative, pleo-morphic organism, of which three varieties are known, namely the caprine, the porcine and the bovine types, all of which are highly invasive for man.

Incubation period: Two weeks with a range from one week to three months or longer.

Onset: Acute with marked weakness, moderate or profuse sweating, chills, and generalized aching. Catarrhal symptoms often appear, with a mild, nonproductive cough. Fever, of variable degree and remittent in type, is present.

Common Clinical Variations: 1. *weakness* and irritability for weeks, even though the fever disappeared within 1 to 6 days after onset. This type may be thought of as "influenza" or may escape diagnosis.

2. *Intermittent type:* A relatively normal morning temperature and an afternoon temperature ranging from 101° F. to 104° F. Fever terminates by lysis in a period of six to sixteen weeks.

3. *Undulant type:* A mild onset marked by muscular and cervical pains, headache and afternoon fever. Fever rises in a step-like manner over a period of 10 days. As the temperature approaches 104° F. the patient develops severe weakness, irritability, insomnia, profuse sweating, loss in weight, and constipation. The fever decreases within a day or so to a normal level, and the constitutional symptoms largely disappear. After a few days of normal temperature fever recurs, accompanied by an exacerbation of the constitutional symptoms. Relapses of this type may appear two or three times or they may appear at intervals for over a year with gradual diminution in severity and duration.

4. *Ambulant type:* Probably affects large numbers of people, who may not seek medical care, due to the mildness of the symptoms of malaise, weakness, headache and slight lever. (Normal morning temperature, rarely exceeded 101° F. in the afternoon). The disease runs its course in two weeks to several months.

5. *Malignant Undulant Fever:* A sudden, severe onset, usual fatal termina-

Abstracted by R. L. Gorrell, M.D., from a paper presented at the Southern Medical Association Meeting, held at St. Louis, Mo., Nov. 13-16, 1944.

tion. High fever is maintained throughout and extreme hyperpyrexia exists prior to death.

6. *Chronic undulant fever* may be evidenced by irritability, insomnia, mental depression, and emotional instability. The temperature may be normal over a period of weeks. When fever is present it rarely exceeds 100° F. in the afternoon.

Differential diagnosis often involves the exclusion of influenza, typhoid fever, tularemia, malaria, tuberculosis, bacterial endocarditis, rheumatic fever, cholecystitis and perhaps neurasthenia.

The blood culture which is positive for brucella organisms is the most conclusive proof of the presence of brucellosis. The culture technique is complicated and slow. Bacteremia may be intermittent and repeated cultures may therefore be required. Cultures which do not show growth should be observed for 18 days before being discarded.

The positive *intradermal test* indicates sensitization to brucella organisms of some variety. The test does not determine whether or not active infection then exists. Local reactions may consist of necrosis, sloughing and ulceration. Sensitized individuals may experience fever, malaise, and other constitutional symptoms.

The *opsonic* test depends upon the presence of brucella antibodies. Negative opsonic test shows an active infection probably exists; Positive test shows previous infection or inactivity.

Brucella agglutinins appear in the blood approximately 10 days after onset. Chronic cases, particularly in children, may fail to reveal the presence of agglutinins. A positive agglutination test indicates that brucella infection has occurred at some time. Serum agglutinations in dilutions of 1:50 or higher are considered to be significant. The presence of clinical signs of brucellosis together with a positive agglutination in high dilution, and especially when repeated tests show an increasing titer, are diagnostic of an active infection.

General Treatment: Rest in bed, forcing fluids, mild sedation, alcohol rubs and other measures to relieve fever and pain. Horse antiserum, vaccines, and brucellin have varying degrees of effectiveness. Specific treatment is not yet established on a firm basis. Sulfonamides have apparently been of value in some cases but their use has often been disappointing. Transfusions from convalescent donors have been very effective in an occasional case.

Epidemiology: Man acquires brucellosis from susceptible animals. A study of brucellosis in goats, hogs, cattle, and to a lesser extent in sheep and horses, has been accomplished. Brucellosis is probably never spread directly from man to man. The porcine species, brucella suis, has been estimated to cause 50 percent of the undulant fever in man. Cattle are susceptible to the goat and pig species in addition to the bovine type of brucella organism which in turn may be passed on to man. *Man acquires undulant fever by eating raw dairy products* from infected herds and by contact with the secretions, excretions, or tissues of affected animals.

Brucella organisms have a relatively high resistance outside the body. The capacity to survive for months under usual pasture or stable conditions renders the eradication of Bangs' disease (brucellosis) in dairy herds extremely difficult. The organisms are present in great numbers in the uterine exudate, fetal membranes, and fetuses of aborting cows. The infection may remain in the uteri of cows indefinitely, following abortion. Vaginal discharges may contain brucella organisms for months. The udder is considered the chief permanent habitat of the Bangs' organism. The organisms are also found in the genital tract, the lymph nodes, the spleen and in the bones and joints. In the male organisms may be found in the testes, seminal vesicles, epididymis and in the semen. *Milk from infected cows nearly always contains brucella organisms.*

The expulsion of the fetus from an infected uterus results in the contamination of everything with which the vaginal discharge, the fetus and the placenta come into contact. Brucella organisms are present in the feces and on the hair of such new born calves. When infected cows deliver in stables or in pastures, exposure of other cows is almost sure to occur. *The presence of other species of animals in the barn and pastures constitutes a definite danger to uninfected cows.* Infected hogs may spread brucella suis organisms to watering and feeding troughs, stalls, barns and pastures. Hogs may be carriers of the bovine or porcine organisms after eating the dead fetus or placenta from an infected cow. The feces of calves which have been fed infected milk

may carry the organisms to pastures and barns.

Summary: Bangs' infected herds present a real health hazard to persons who consume raw milk or raw milk products. No Bangs' eradication program can rule out the human element. Calf-hood vaccination is of questionable value and may be dangerous to the public who consume raw milk from herds where this proceedure is being carried out. The simple effective solution in the prevention of undulant fever consists in the compulsory pasteurization of all milk and milk products intended for public consumption.

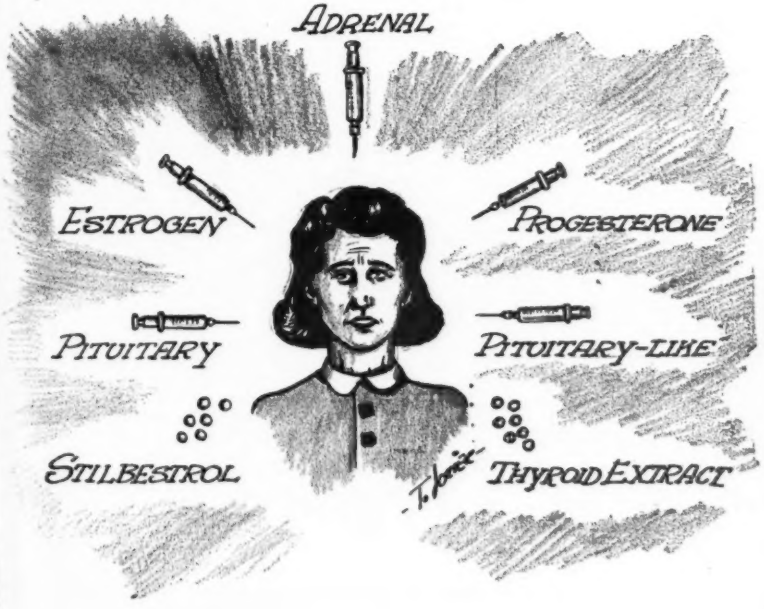
Common Mistakes in General Practice

(Indiscriminate Use of Hormones)

One of the most common mistakes is to administer various hormones to the girl or woman who complains of amenorrhea, menorrhagia, polymenorrhea or dysmenorrhea, *before* performing a complete examination.

"Estrogen should never be given to a young woman who is menstruating." (Dr. E. Cruz-Coke, Laboratory of Physiology, University of Chile, in CLINICAL MEDICINE 51:71 Mar. 1944).

"The unwise and unstudied administration of various endocrine preparations for amenorrhea, menorrhagia and other menstrual abnormalities is the greatest error of the general practitioner. Nowadays one rarely sees a new patient who has not been subjected to such treatment. A crusade to curb the indiscriminate use of hormone preparations would be difficult to undertake and difficult to put across. Perhaps CLINICAL MEDICINE can manage it." (Letter from Pendleton Tompkins, M. D., Gynecologist, Pennsylvania Hospital, 807 Spruce St., Philadelphia, Pa.)



Rheumatoid Arthritis*

Diagnosis

1. Insidious, diagnostic signs of onset, or acute with signs of active infection.
2. Soft fusiform swellings, usually symmetrical, (fingers appear spindle shaped).
3. Rapid sedimentation rate.
4. Loss of weight.
5. Hypochromic Anemia.
6. Muscle atrophy. (All the structures around the joint atrophy, shrink away).
7. Erosion of bone (by x-ray) with generalized decalcification.

Types

1. Active and inactive rheumatoid arthritis.
2. Rheumatoid arthritis associated with other forms of arthritis, such as osteoarthritis.
3. Still's disease.
4. Felty's syndrome.
5. Marie Strumpell arthritis.
6. Rheumatoid arthritis associated with psoriasis.

Essentials of the Examination

1. A complete medical survey.
2. Specific search for foci of infection.
3. A thorough orthopedic examination.
4. A record of the amount of disability.
5. Laboratory data: A. Sedimentation rate. B. Complete blood count. C. urinalysis. D. Blood uric acid. E. X-rays of joints most affected. F. Culture of synovial fluid when a specific infectious arthritis is suspected, such as gonorrheal arthritis.

Treatment

1. Constitutional rehabilitation.
2. Gold salts therapy.
3. Transfusions.
4. Prevention of deformity.
5. Treatment of deformity.

Systemic Treatment

1. The treatment of any derangement found after a thorough medical survey.
2. Rest, general (physical and mental) and local.
3. Proper nutrition.
   A. Adequate teeth for chewing.
   B. A well-balanced high vitamin diet.
4. Proper gastrointestinal function.
   A. Hydrochloric Acid when indicated.
   B. Proper bowel elimination.
5. Iron.
6. Correction of Postural defects (especially weak feet).

Transfusions in Rheumatoid Arthritis

Method: 500 cc. of whole blood once a week for twelve weeks.

Rationale: 1. The improvement of the Hypochromic anemia. 2. The correction of the disturbed albumin-globulin ratio. 3. The production of non-specific protein shock reactions. 4. The transference of passive resistance.

Indications for Gold Salts Therapy

1. A positive clinical diagnosis of *active* rheumatoid arthritis.
2. A duration of the disease longer than three months.

Summary of Therapeutic Results and Toxic Reactions after Administration of Gold Sodium Thiomalate Subcutaneously.

Number of subjects	Private 176		Clinic 88		Combined 264	
Marked improvement	30	34%	14	32%	44	33%
Moderate improvement	18	20%	10	23%	28	21%
Slight improvement	26	29%	8	19%	34	26%
No improvement	14	16%	10	23%	24	19%
Dermatitis	22	25%	6	13%	28	21%
Stomatitis	6	6%	10	24%	16	12%
Loss of Taste	2	2%	0		2	
Purpura	2	2%	0		2	
Boils	0		2	4%	2	
Leucopenia	0		0		0	
Renal Irratation	0		2	4%	2	
Total Reactions, all Types	32	36%	18	41%	50	38%
Negligible Reactions	22	25%	14	32%	36	28%
Serious Reactions	10	11%	4	9%	14	10%

*Notes taken at the New York Postgraduate Medical School, June 15, 1944, by R. L. Gorrell, M.D.

Contraindications

1. Lupus erythematosis disseminata with "rheumatoid arthritis."
2. Acute rheumatic fever with or without carditis.
3. Renal impairment.
4. Blood dyscrasias.

(There is much dispute as to the value of gold salts in the treatment of rheumatoid arthritis. There is no dispute as to the seriousness of reactions which occur in one patient in ten during such therapy, and a number of deaths have been reported. In fairness to the patient, such risks should be explained *before* treatment is begun.—Ed.)

Administration of Gold Salts

Dosage Schedule: 1st dose — 10 mg. gold salts. 2nd dose—25 mg. gold salts. 3rd dose — 50 mg. gold salts. Thereafter 50mg. gold salts. Interval between injections: 3 to 7 days. Total dosage (one course): 1000 to 2000 mg. Interval between courses: 2 to 3 months. Total Courses: 1 to 3.

Precautions

1. Before each injection: A. Question the patient as to itching of skin. B. Examine the skin for a rash or purpuric spots. C. Examine the mouth for stomatitis. D. Examine the urine for albumin and red blood cells.

2. Every two weeks: A. A white blood count and differential count. B. A hemoglobin determination.

3. Additional Precautions in Suspect Subjects: A. Addis counts. B. Platelet counts.

The Commoner Toxic Reactions

1. Pruritis
2. Dermatitis
3. Stomatitis
4. Renal Irritation
   - Albumin
   - Red blood cells
5. Leucopenia
6. Neutropenia
7. Thrombopenia without, or with, purpura

Gold Salts in Common Use

	Percent of Gold	Trade Name	Soluble in Water
Gold Sodium Thio Sulphate	37½%	Sanocrysin	Yes
Gold Sodium Thio Malate	50 %	Myochrysine	Yes
Gold Calcium Thio Malate	44.4 %	.....	No
Gold.....Thio Glucose	50 %	Solganal	Yes
Gold Glycol Thio Anilide	50 %	Lauron	No

Vas Deferens Anastomosis

Under procaine infiltration anesthesia, a search is made for the site of division of the vas deferens. The club shaped ends are cut back until the patent lumen appears.

A hollow stainless steel tube, 9 mm. in length and number 21 gauge, is made by cutting the ends off an ordinary Becton-Dickinson stainless steel intravenous needle, beveling the ends and cutting transverse grooves near each end with a dental emery wheel (see top row of sketches in Fig. 1. The final sketch illustrates the finished tube.)

Exposure and preparation of the spermatic duct for anastomosis is shown (left sketch in second row of sketches) and the appearance after insertion of the tube (right in second row).

The tube is held in place by ligatures of fine black silk, which are tied around the vas at the levels of the grooves previously cut in the tube. Interrupted sutures of black silk join the line of anastomosis.—Lt. Comdr. Charles S. Cameron (MC) USNR, in *J.A.M.A.*, April 25, 1945.

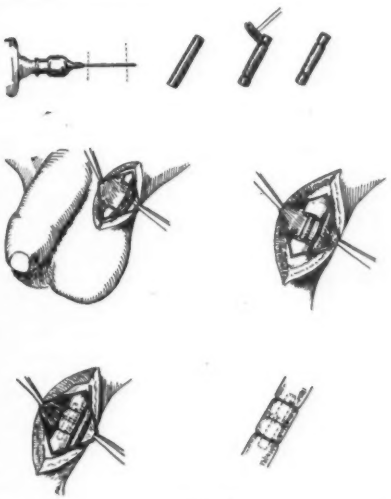


Fig. 1

The Treatment of Weak, Painful Feet

By WALTER TRUSLOW, M.D., F.A.C.S., *Brooklyn, N. Y.*

Physicians have neglected caring for painful feet because there was no simple technic available. The author describes methods that may be employed anywhere.

The average physician may do much to relieve the simple disorders of first and second degree flat foot. These cases need: 1. Shoes ample enough to avoid faulty pressure effects other than at their bases; 2. adequate basal support and 3. muscle re-education to restore the tone of weakened muscles, especially the peronei and two flexing muscles.

The shoe should be roomy, especially at the front, with a minimum of toe pointing; should have a rigid shank and a closely fitted heel with a stiff counter. The heel should be no higher than the "Cuban." The special build-up of the insole is so individual as not to be met by the shoe alone. While the shoe is not in itself corrective, it should not be a cause of deformity, which so many shoes of today are. Today, women and girls can get a shoe, which is not gauche in appearance and is not deforming.

Temporary Padding for Relief

The build-up of the insole is met, first by a special padding and strapping for about one week only. A piece of felting is cut and so edge-beveled as to make a pad which shall extend from the inner rear of the arch forward to the bases of toes I and V and somewhat further forward to support the bases of toes II, III and IV (see Fig. 1) It should be highest beneath the scaphoid bone on the inner side of the long arch.

In this "sole-contourer" (and in that of the more permanent insole foot support), the physician should visualize the ideal sole contour and should meet it with the padding described. The prepared contourer is applied to the sole of the foot and held to it by just enough adhesive plaster to keep it in position—the resulting dressing consitituting a "slipper" (Fig. 2). Only in case of ankle swelling should the adhesive plaster extend upward, and that not more than about two inches above each malleolus. This padding and strapping usually affords immediate comparative relief from pain and prepares the feet for more permanent support.

Fig. 1. First step in padding and strapping of the right foot. The patient sits with right leg in "side saddle." (All the illustrations in this article are redrawn from "Body Poise" by Walter Truslow, M.D., published by Williams and Wilkins Company, 1943).

Fig. 2. Sole contoured "slipper" completed for the right foot.

The Permanent Insole Brace

Before padding and strapping, the doctor should draw an outline of the foot on a large pad, should note the base of the great toe, the base of the little toe and the point near the rear of the inside where the long arch should begin to rise. He then takes this tracing to his workbench or desk and with the patient's shoe before him and, with the use of an

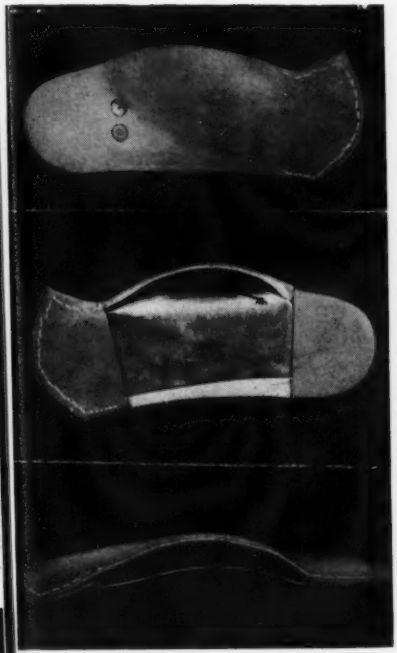


Fig. 3. Insole brace for the right foot, shown in three views. A minimum amount of metal is used to "bridge" the shank of the shoe; a contoured cork, felting, or sponge rubber with leather insole to stabilize with the inside of the shoe.

architect's caliper, projects the width of the heel and the width of the front of the shoe's insole on his diagram and he draws free-hand the sides of the insole.

Between the first and second visit of the patient, the physician constructs the more permanent special insoles to meet the individual needs of his patient. For this, he uses a moderately stiff piece of leather for the top (Fig. 3 shows metal), a suede leather for the bottom and felting or light cork, contoured (as in the description of the padding and strapping) to the individual's need, and which is "sandwiched" between the leathers and held in place by glueing and sewing. A local cobbler can do the sewing. The contoured insole should not be too high at first as it can be raised from time to time.

Some patients will be entirely satisfied with this support, and will wear such special insoles indefinitely; but the physician should endeavor to restore the muscle tone to such an extent that special insoles may be gradually discarded.

Fig. 4. "Key-note" foot developing exercise for the right foot: The forefoot is turned upward and inward, with the toes flexed. The position and exercise are reversed for the left foot.

Foot Exercises

Except in extreme flat foot, this restoration can be accomplished by muscle reeducation. Special foot exercises are given at the visit when the more permanent insoles are applied. Exercises should be given in a sitting position rather than standing.

The following exercises have been found to meet the needs: Left Foot — Place the left ankle over the right knee, raise the left foot and sole upward and inward, (abduction and inrotation) with toes flexed; Right foot — Place the right ankle over the left knee, raise the right foot and sole upward and inward, with the toes flexed. (Fig. 4). The patient should be shown this and instructed to do the exercises twice daily, ten motions to each foot. If the feet are rigid in the deformity, the patient may use his hands, for a few weeks, to forcibly adduct and inrotate the foot and to flex the toes. The physician will do well to

give this himself in the case of rigidity for the first few weeks (Fig. 5).

Individual deformities and disabilities of the feet, due to fractures and dislocations, to infantile paralysis, to true rheumatoid arthritis, and to circulatory disturbance, are specialized needs which require specialized care. The more frequent, but often painful, uncomplicated, weak-foot conditions should be given thoughtful consideration and care by all physicians.

142 Jorelmon Street.

Fig. 5. Manipulation for spastic flat foot (left foot is shown); The patient sits on the examining table. The operator firmly grasps the mid foot with the left hand and with the right hand spread over all the toes, bends the toes downward and inverts the forepart of the foot. The patient's heel on the operator's knee helps to fix the rear of the foot.

Adrenal Disease*

HYDROADRENIA (adrenal deficiency): Early diagnosis permits more effective treatment. A classification of adrenal cortical deficiency includes:

1. Clinical adrenal deficiency which precedes:
2. True Addison's disease
3. Pituitary Myxedema
4. Waterhouse-Friderichsen syndrome
5. Acute adrenal deficiency associated with surgery on the adrenal glands.

Addison's Disease: Low blood pressure, pigmentation of the skin and marked weakness.

Myxedema: The clinical picture of myxedema may be the result of pituitary deficiency, and on that basis, adrenal deficiency. If thyroid extract is given, the basal metabolic rate increases and an acute adrenal crisis may occur. If pituitary deficiency is present, there will be signs of testicular or ovarian deficiency.

Friderichsen syndrome: This syndrome occurs in children and young adults; it is a serious infection with purpura, due to the meningococcus or staphylococcus. The shock may be due to the overwhelming infection or to bilateral adrenal hemorrhage. The treatment is;

1. Overcome the infection.
2. Treat the shock-like syndrome.

Large doses of the adrenal cortical hormone must be given, as infection requires 5 to 50 times the normal maintenance dose of this hormone. If the patient lives we cannot prove the cause of the shock.

Addison's Disease

Cause: 40 percent are due to tuberculosis, 60 percent to other causes. The discovery of tuberculosis anywhere in the body is evidence that it is the cause of Addison's Disease, in the patient. We do not know the etiology of the nontubercular Addison's Disease. The patient with combined tuberculosis and Addison's Disease has a poor outlook.

Age: Between 30 and 50 are found the great majority of cases.

Symptoms: Weakness, fatigue and weight loss are found in all patients with Addison's disease. We can almost

* Notes by R. L. Gorrell, M.D., at War Time Graduate Meeting, Denver, March 15, 1945.

rule out adrenal deficiency if the patient has maintained his weight. *Increasing* pigmentation of the skin and mucous membranes occur in 90 percent of the patients. The amount of the pigment is not important but the change during the preceding year is very important.

Loss of appetite, nausea and vomiting occur in ¾ of the patients. If all persons with vague-intestinal symptoms and low blood pressure were studied, one would pick up a number of cases of early Addison's disease. Abdominal pains occur in ⅓ of patients following excessive salt loss, heat shock or diabetic acidosis. An indication of salt loss is a marked desire for salt in a patient who had no such desire previously.

Low Blood Pressure: This is not always reliable as the patient might have had high blood pressure previously. The old criterion of a systolic blood pressure of 100 or less is wrong, especially in older persons.

The heart size is less than the predicted (Expected) Normal. It is never larger than normal. If a person with Addison's disease has a heart which is near normal size or enlarged, cardiac disease is probably present.

Hypometabolism: The basal metabolism is in a narrow range of minus 10 to minus 20. If the basal readings are lower, one should suspect pituitary involvement. The patient needs thyroid extract and either male or female sex hormone plus adrenal hormone. If the reading is a plus 5 or plus 50 early hyperthyroidism should be suspected.

The 17-Keto steroid excretion in urine: The adrenal cortex is responsible for ⅔ of this excretion and the male gonads for ⅓. Thus males have a 30 per cent higher excretion. In women, the adrenal cortex alone is responsible for the excretion. Many factors effect the 17-Keto steroid excretion. If such excretion is in normal range, it is consistent with Addison's disease. If high, one should suspect an adrenal tumor. If the excretion is low, it is consistent with Addison's disease.

Tuberculosis: Tuberculosis helps to support the diagnosis of Addison's disease, especially if genital tuberculosis is present. In this connection, one should test the adrenal function before removing a tubercular kidney or a tubercular genital organ. A high mortality rate follows operation on patients with adrenal deficiency.

Tests for Addison's Disease: Wilders test involves salt withdrawal which is followed by the appearance of the symptoms of Addison's disease. It should only be used where the adrenal deficiency is mild as a severe reaction might occur.

Kepler's water test: The patient with Addison's disease cannot excrete water taken orally. Normally, drinking of water is followed by a rapid excretion. This is a good test for use at home and has no severe responses.

Glucose tolerance: After glucose has been given a normal blood sugar curve is obtained at the end of one hour, following which hypoglycemia appears. The response to hormone treatment may be used as a diagnostic test.

Pigment: The pigment should have *increased* during the preceding year. It is blue-black in color, often noticed in the mouth and other mucous membranes. It often cannot be detected in exposed surfaces or the patient may state that his tan persists even though there is no further exposure to sun or ultraviolet light. Pigmentation may occur on the arms and legs and at the pressure points. Black freckles may appear. Areas of vitiligo may appear but are more often due to other causes such as goiter, metal poisoning, or celiac axis tumors.

X-Ray: One may find calcification in the adrenal area in an x-ray of the abdomen.

Treatment: 1. Adrenal cortex. The adreno-tropic hormone from the pituitary gland is good, but very limited in amount. Whole adrenal extract contains all the elements but is used in water so that the effect is gone quickly. It must be injected 2 or 3 times daily.

2. Synthetic hormone (desoxycorticosterone) is deficient in certain constituents. Carbohydrate must be kept up, as the synthetic hormone won't maintain the carbohydrate level. The synthetic hormone does hold strongly to sodium chloride.

For emergencies one should use the adrenal cortex in water. Eschatin (Parke-Davis), Adrenal cortex extract (Upjohn or Wilson). Wilson also makes an adrenal cortex in oil. A synthetic hormone is standardized. The trademarks are Percorten (Ciba), Doca (Roche) and Cortate (Schering).

Simple Office Test

The patient receives intramuscular injections of 5 mg. (1cc) of Percorten (or any other synthetic adrenal cortex hormone, known as desoxycorticosterone) every other day, for 5 to 10 injections,

following which he is given placebo injections of a substance exactly resembling the hormone. Patients with true Addison's disease will feel better following an injection of synthetic hormone and will rapidly become weak after placebo injections. The psychoneurotic patient will feel improved as long as injections are given.

This test will insure the diagnosis, in a high percentage of cases and indicate those who will respond to treatment. The normal patient will experience no change in body weight. The patient with adrenal disease will gain weight promptly. The blood pressure will show a rise in patients with adrenal disease. There will be a general clinical improvement in patients with Addison's disease. The dosage described above is ½ the amount required for the patient with severe Addison's disease.

Contra-indications: Heart disease, high blood pressure, and edema are contra-indications to such a test, as the synthetic hormones cause retention of salt. The salt test is not an efficient test for Addison's disease, as it does not give results with those persons who lose salt through damaged kidneys. Such persons would feel better from the salt so the test is not specific. Too large doses of synthetic hormones cause edema, high blood pressure, headache, generalized pains, enlarged heart, pains, weakness and paralysis.

Differential Diagnosis: Myasthenia gravis is improved by injection of prostigmine. Pituitary deficiency may be recognized by a low basal metabolic rate (minus 20) and atrophy of the gonads. Neurasthenia may be ruled out by giving the injection of synthetic hormone as indicated above, using the response of the patient as a diagnosis test.

Discussion: 1. Dr. Darley: Why do joint contractions and painful tendon contractures occur? Answer: If too much synthetic hormone is given a sodium retention occurs. Tendons have the highest sodium content of any body tissue. It is possible that potassium is displaced and tendon contracture follows. If whole adrenal extract is given for three months, instead of the hormone, much of the tendon contracture is reversible. Involved is the area around the joints, not true arthritis.

2. Major Leggett: The use of pellets of synthetic hormone implanted under the skin produces a steady even dosage. The dose must be exactly determined as under-or-over-treatment is dangerous.

3. Dr. Thorn: Adrenal hormore is ineffective in patients with normal adrenal glands who are in shock. Do not rely on a synthetic hormone but give very large doses of true hormone intravenously, (100 to 200 units).

Reduction of the Dislocated Shoulder

Reduction of the dislocated shoulder: X-rays are taken, where possible, to rule out fracture of the head of the humerus. ¼ gr. of morphine is given intravenously or subcutaneously.

With the patient lying on his back, an assistant applies firm traction on the opposite arm *or the same force is applied to a sheet around the patient's thorax.* Gentle, constant and increasing traction is applied to the dislocated arm, with the elbow flexed at a right angle, the forearm being held in a vertical position.

The patient is reassured and asked to breathe deeply and relax the shoulder muscles. While constant traction is maintained, the flexed arm is gently rotated toward the head as shown in Fig. 1. The head of the humerus slides into the shoulder joint with ease.

This method has been entirely successful with anterior, posterior and inferior dislocations. No anesthetic was necessary—Lt. Col. L. F. Rush, M.C., in *Am. J. Surg.*, March 1945.

Fig. 1.

The Diagnosis of Nephritis*

A PATIENT with nephritis may consult you during the acute hemorrhagic stage, during the nephrotic stage or during the stage of chronic nephritis. Edema and hypertension may or may not be present. *The diagnosis may be obscure*, as it is a disease of many passing phases.

Etiology: Sensitization to a hemolytic streptococci is believed to be the cause. During the convalescence from scarlet fever, and especially from two and three weeks following the onset, acute hemorrhagic nephritis may appear with severe edema following streptococcic throat and scarlet fever or with no symptoms at all (only a routine urinalysis will detect all cases—Ed.)

Rabbits which had been made sensitive to hemolytic streptococci, were exposed to continuous toxins of streptococci by implanting a capsule containing such organisms. The toxins diffused through the walls of the capsule. Typical hemorrhagic glomerulonephritis followed in many instances (Longcope).

Stages

1. *Acute nephritis:* Symptoms vary with the severity of the disease and rapidity of the onset, ranging from a slight involvement without signs or symptoms to severe nephritis with marked edema and hypertension.

All symptoms are due to vascular damage:
- Edema
- Hypertension
- Urinary findings

Edema is due to generalized capillary damage, the capillaries being damaged in all portions of the body. The injured capillaries may be seen in the retina with the ophthalmoscope. The kidney capillaries permit loss of protein (albumin) and red blood cells, which account for the urinary findings. The injured body capillaries permit protein to pass into the tissue spaces (interstitial spaces), carrying water with it and thus accounting for the *edema*. There is no appreciable drop in blood protein levels as the protein is replaced rapidly; in contrast, the nephrotic stage is remarkable for its low blood proteins and the difficulty in bringing them up to a normal level.

(See *Clinical Medicine*, May, 1945, for Pictorial presentation of edema and capillary circulation—Ed.)

Undiagnosed Heart Failure

The edema is also made worse by congestive heart failure. *Such heart failure is often unrecognized* if not thought of. Venous pressure is always elevated, if congestive failure is present (look for distention of superficial veins; if possible. measure venous pressure directly).

Slight edema is visible in the eyelids and transiently in the fingers and feet. If the edema is severe, fluid appears in the pleural, pericardial and peritoneal cavities with anasarca.

Urinary Findings

Because less fluid is available, urinary output decreases until *oliguria* or even *anuria* appears with dark, scanty urine red blood cells, white blood cells, casts and albumin. The dark color is due to concentration of urochrome, the normal urinary pigment. The brown color is due to the formation of acid hematin from the red blood cells.

Clinical Appearance

The patients with *severe* nephritis have a pasty, pale yellow appearance. They may or may not be anemic. (Patients with mild nephritis may appear well—Ed.) This appearance is due to the edema of the face.

Pathological Physiology

Vascular spasm leads to high blood pressure, which in turn results in hemorrhages into the retina, cerebral symptoms or "hypertensive encephalopathy" due to spasm of arterioles in local area and release of spasm with consequent edema of the brain.

Cerebral symptoms: Twitchings, visual disturbances, delirium, unconsciousness, hemiplegia or paraplegia.

Blood Chemistry Changes

Nitrogen retention occurs, due to decreased elimination of nitrogen (nitrogen retention may also occur if nitrogen production is increased, under other circumstances.) The kidney usually has good concentrating power but little urine is excreted. Its specific gravity is high. The nonprotein nitrogen in the blood is not elevated if ample fluids are furnished and oliguria is not present.

Clinical Course

Acute glomerulonephritis usually subsides in two or three weeks. 85 per cent of patients recover from first attack, so the prognosis is good.

* Notes taken by Dr. R. L. Gorrell at Tulane University, New Orleans, La., Feb. 5, 1945, from a lecture by Dr. Nadler, Assistant Professor of Medicine.

Nephrotic Stage

The chronic stage appears in a small percentage of patients.

1. Nephrotic type of chronic nephritis: Something happens to the kidney so that albumin escapes in the urine in large amounts. All following symptoms and signs depend upon the protein loss and lowered blood proteins. The body cannot replace the protein and the blood protein drops below 5.1 Gm. total or 2 to 3 Gm. of albumin.

With the decrease in the amount of circulating protein in the blood, the osmotic pressure or pulling power of the proteins is decreased and fluids are not pulled back from the tissue spaces, thus resulting in *marked edema*.

Compensatory mechanism: The body mobilizes its own fat to increase colloid pressure. The blood fat rises, at times even to a lipemia so that there will be as much fat in the blood as there is cream in milk (on letting the blood stand). The blood cholesterol also rises.

Spontaneous "cure": For some reason as yet unknown, the albuminuria may stop suddenly, diuresis may begin, the edema disappear and the patient appears clinically well. There is always some residual renal damage, however.

2. Chronic hemorrhagic nephritis: This represents the worst renal damage. Little or no edema may be present, but acute hemorrhagic nephritis may recur or the nephrotic stage may appear.

Clinical Picture

There are the same findings as in terminal arteriosclerotic kidney, the chief difference being in the number of red blood cells in the urine. The kidneys cannot concentrate fluids and *low specific* (1.010) gravity of the urine is the usual finding.

Polyuria and nocturia occur because the damaged kidneys require large quantities of water to excrete waste products. Nitrogen retention (uremia or azotemia) occurs if insufficient urine formation occurs. There is a tendency to *acidosis* because of the loss of fixed base and retention of acids with nitrogen retention.

Treatment

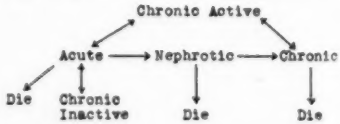
Anemia is severe and progressive. The prognosis can be gauged by the severity of the anemia. Treatment for such anemia is ineffective, liver, iron and vitamins being valueless and transfusions of only transient value. Such patients are prone to reactions from transfusions.

There is no specific therapy. 1. Removal of foci of infection may be of value. *water* should be given freely in all stages. 2. No salt should be given during the edematous stages, as salt is retained with water in the tissues, thus increasing the edema formation.

3. In the nephrotic stage, one should inject blood plasma or blood transfusions and prescribe a high protein diet. If possible, inject dried plasma to which has been added only 150 to 250 cc. of water instead of the original 500 cc. 4. For chronic hemorrhagic nephritis, one may treat acidosis with parenteral fluids (molalactate solution, which also may be given orally) and an alkaline ash diet. 5. Nitrogen retention: The increased urea in saliva results in ammonia formation, ulcers around the tongue and mouth and along the gum margins. If infection supervenes, serious consequences may follow. A mild mouth wash is often effective.

The same reaction occurs in the stomach with punctate hemorrhagic areas and ecchymosis, with occasional vomiting of blood. Gastric lavage relieves this complication. The same process occurs in the colon and results in diarrhea, which is relieved by high colonic lavage.

Give a high protein diet during the chronic nephritis to avoid low blood protein level (1½ Gm. of protein should be given per kilogram of body weight).



You may see a patient in any stage. In younger persons, the differential diagnosis between lipoid nephrosis and the nephrotic stage of glomerulonephritis may be difficult. If counts are made of the centrifuged urinary sediment (Addis counts), the cell count will be much higher in nephritis.

Everyone's life is measured by the power which that individual has to make the world better—that is all life is.—BOOKER T. WASHINGTON.

Peritonescopy

Condition	*Peritoneoscopic Possibilities*
1. Abdominal masses	1. Identification of the tumor by inspection and biopsy; determination of operability, in some case, and best method of approach; ruling out of pseudo-tumors, accessory lobes of liver, thick omental adhesions, fatty omentum.
2. Abdominal injuries; suspected intra-abdominal bleeding or perforation	2. Quick diagnosis of intra-abdominal injury or hemorrhage; location of incision directly over injured area; avoidance of surgery if no lesion below abdominal wall.
3. Cancer of stomach, intestine, ovary	3. Visualization of metastatic nodules in liver or peritoneum; determination of local extension and operability; exact diagnosis of growth.
4. Ectopic pregnancy	4. Rules out pelvic inflammatory disease, normal intra-uterine pregnancy, miscarriage, appendicitis.
5. Jaundice	5. May give definite evidence for exploration (see gall bladder).
6. Ascites	6. Diagnosis of cirrhosis of carcinomatosis, or rarer conditions; suction can be made through the same sheath.
7. Cholecystitis	7. Chronic cholecystitis may be *positively* diagnosed in many cases; in a few cases, stones can be palpated.
8. Adhesions	8. Diagnosis as to presence, extent and location; surgical possibilities for cure.

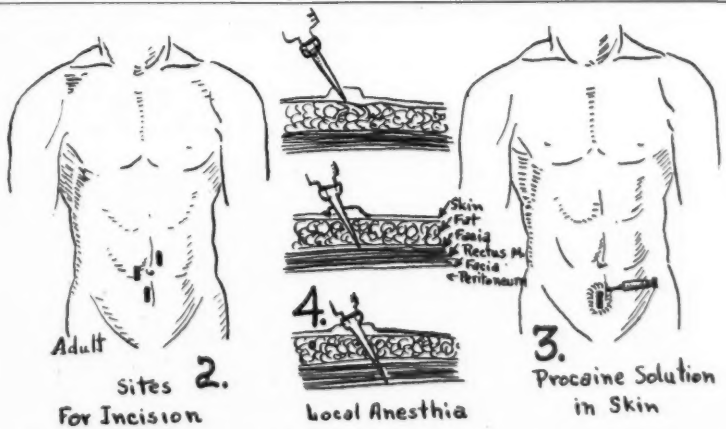


Fig. 2. The peritoneoscope may be inserted through an incision in the rectus muscle above, below or to the side of the umbilicus, depending upon the area to be studied. The pelvis can be seen more clearly if the incision is made midway between the umbilicus and the pubes (catheterization should precede). If operative scar is present, introduce the peritonescope through the opposite rectus muscle.

Fig. 3. Procaine solution is injected into the skin around the proposed site of the incision.

Fig. 4. Lateral view showing injection of procaine solution into the skin, with (c) and (d) illustrating the injection of procaine into the sensitive sheath of the rectus and just above the peritoneum. It is not necessary to inject procaine into the insensitive subcutaneous tissues. A good local anesthesia renders peritoneoscopy painless.

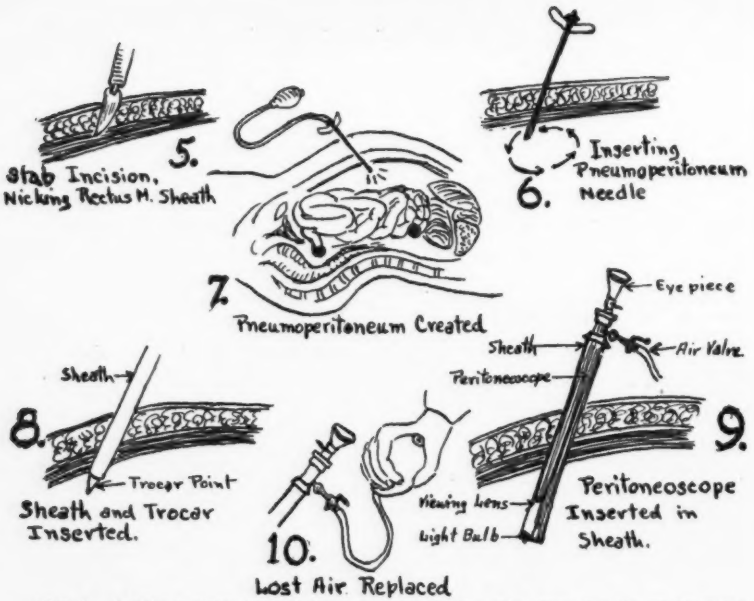


Fig. 5. A skin incision ½ inch long is made in the skin, then the tip of the knife makes a short incision (¼ inch) into the sheath of the rectus.

Fig. 6. The pneumoperitoneum needle is inserted and the tip is revolved in a circle to make sure that no adhesions are present.

Fig. 7. Following this, air in injected with simple bulb apparatus or by attaching to low pressure oxygen tank. The abdomen is distended until tense and does not yield on pressure, so that the intestines and other organs are far away from the anterior abdominal wall and cannot be injured.

Fig. 8. The peritoneoscope sheath and trocar is inserted through the incision to replace the pneumoperitoneum needle.

Fig. 9. The trocar is then removed, the peritoneoscope is inserted into the same sheath and the instrument swung around so that all accessible organs can be inspected.

Fig. 10. Distension of the abdomen is maintained by replacement of lost air without removal of the peritoneoscope.

Photograph showing introduction of the pneumoperitoneum needle (courtesy of Dr. Ralph Gorrell and *Review of Gastroenterology*).

The same patient after distending the abdomen and insertion of the peritoneoscope which is being used to inspect the peritoneal cavity. The abdominal organs are best seen when the room is darkened.

Peritonescopy

Looking into the abdominal cavity is a simple procedure. The illustrations indicate (1) the technic of introducing the instrument, and (2) what may be seen through the peritoneoscope.

The peritoneoscope may be used by any man who aspirates the abdomen for ascites.

Indications: Soft tissue lesions which cannot be accurately diagnosed by the usual methods of examination. Certain cases on this list are aided by peritoneoscopic study:

Contraindications: Acute infectious processes of a spreading or generalized nature, and widespread adhesions.

Disadvantages: (1) Viscera cannot be palpated, (2) retroperitoneal structures cannot be seen, unless enlarged, (3) peritoneoscopist must have some knowledge of anatomy and gross pathology, in addition to a moderate amount of experience in identifying structures through the instrument. The latter statement is not true in regard to many common pathologic conditions, as eight inexperi-

Fig. 11. Metastic carcinoma of liver with implants under the diaphragm.

Fig. 12. Atrophic cirrhosis, Laennec's Type.

Fig. 13. Fibroid tumors of the uterus. View includes undersurface of bladder and portion of tube as well as suspensory ligament and loop of bowel.

Fig. 14. Ovarian syst. Note translucent character of cyst with visible blood vessels.

Peritonescopy

enced physicians made a correct diagnosis of multilobar, non-adherent ovarian cyst after their first use of the peritoneoscope.

The excellent illustrations depicting peritoneoscopic views are reproduced through the courtesy of J. C. Ruddock, M.D.* of Los Angeles, who devised the modern efficient peritoneoscope, and L. W. Manners, President of W. F. Prior Company, Hagerstown, Maryland, who publish the three volume, loose-leaf "Gynecology and Obstetrics." This is the first work on these topics to be published in loose-leaf form so that it can be kept up to date constantly. The illustrations are unusually beautiful and helpful.

*Now a Captain (MC) U.S.N.R., on active duty.

Fig. 15. Papillary cytadenoma of the ovary with implants on the peritoneal surface of the bladder and uterus.

Fig. 16. Chronic pelvic inflammatory disease. Note the swollen, inflamed and tortous tube with adhesions.

Fig. 17. Intra-abdominal adhesions as noted under appendix scar.

Fig. 18. Metastic carcinomatous implants over parietal peritoneal surfaces and bowel surface.

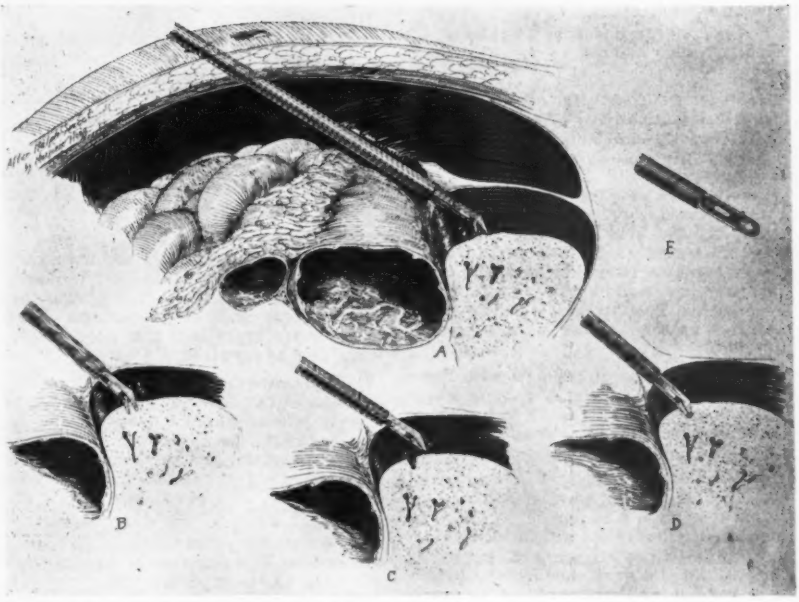


Fig. 19. Technic of pelvic examination with view of pelvic organs obtained through peritoneoscope after pneumoperitoneum is produced. The pelvic organs are manipulated through the vagina to bring them into better view. If the incision for peritoneoscopy is made nearer the pubes (see Fig. 10), one can look directly down into the pelvis.

Fig. 20. Technic of obtaining biopsy specimens from the liver, solid organs or tumors. A:— Selection and Visualization of the site; B:— Plunging open biopsy forceps into liver tissue; C:— Closing forceps, removing and watching wound for bleeding; D:— Coagulating wound after closing tip of biopsy forceps and E:— Biopsy specimen intact inside of forceps.

Rheumatic Fever I: Etiology, Epidemiology, Prevalence*

By A. G. WEDUM, M.D.,† Denver, Colorado

I. *Role of the Streptococcus:*

The beta-hemolytic streptococcus is the only streptococcus now definitely felt to be associated with rheumatic fever. The body may be allergic or hypersensitive to the organism or its products, to the streptococcus plus something from the body, or to something that the body makes in response to the organism (autoantigen).

A. The rheumatic episode develops in three stages:

1. Phase I comprises a relative mild streptococcal infection.
2. Phase II is a quiescent period lasting from 7 to 14 days: the patient is apparently well.
3. Phase III is acute rheumatic fever.

B. Severe streptococcal infections are usually *not* followed by rheumatic fever.

C. Four to five per cent of streptococcic infections are followed by rheumatic fever, in children. Does this mean that this per cent of all children will develop rheumatic fever, as all are exposed to streptococcal infections? Actually, two per cent show signs of heart disease and two per cent are potential cases (a history of polyarticular rheumatic fever) or possible cases (doubtful heart findings), as studied in large series. This applies to many northern and eastern states as well as to Colorado.

D. Three-fourths of children with rheumatic fever have a prior history of streptococcal infections; 70 to 95 per cent, in Army camps. Rarely, other infections are followed by rheumatic fever—dysentery, malaria, sandfly fever.

E. Children with known rheumatic infection will have a 50 per cent chance of recurrence after streptococcal infections. A cold causes recurrence in 33 per cent. *One should prevent respiratory infections among rheumatic children,* possibly by sulfonamides for individuals and prevention of cross infections in convalescent homes. Recurrences *occasionally* follow tonsillectomy, appendectomy, protein shock, and smallpox vaccination.

F. Streptococcal infections and carriers must be differentiated. If a throat culture reveals a common type of streptococci, it is not important. If a new type (new to that area) is found, the child should be isolated.

II. *Influence of Heredity*

History	Percentage
No rheumatic fever in either parent	39%
Rheumatic fever in one parent	61%
Rheumatic fever in both parents	100%

B. *The physician must insist that brothers and sisters of patients with rheumatic fever be regularly examined for the earliest sign of rheumatic fever.*

III. *Age*

Maximum rate of incidence is at the age of 7. Is this because a new susceptible group is entering school with its contacts? In Army camps, the rheumatic fever rate drops when new recruits are not admitted. Children also have immature immune mechanisms and structures. Puberty lessens recurrences and tends to a more benign type of rheumatic fever.

IV. *Climate*

A warm dry climate is associated with fewer respiratory infections. The climate itself is not curative. Do not send a rheumatic fever patient to Arizona unless good living conditions and good medical care can be obtained.

V. *Environment*

Experience in the Armed Forces camps has eliminated many of the factors formerly thought to be so important in the development of rheumatic fever, such as dietary deficiency, rats, fleas, and poverty. Not eliminated are:

A. Cold, fatigue, and dampness.

B. Crowding of a number of men in one room. The number of persons in a room is more important than the floor space per person. Crowding aids spread of reinfection. Only 6 to 8 children should be allowed in one room in convalescent homes; hospitals should introduce measures to reduce the amount of dust and bacteria carried by the air.

C. A child with active or inactive rheu-

*Brief notes taken by R. L. Gorrell, M.D., at a Rheumatic Fever Refresher Course, June 4-6, 1945, University of Colorado Medical School.

†Assistant Professor of Bacteriology, University of Colorado.

matic heart disease should have a bed to himself in his own home.

D. The introduction of a large number of new susceptible persons into schools or Army camps is always followed by an increase in streptococcal infections and later by rheumatic fever.

VI. *Deaths Resulting from Rheumatic Fever*

A. At all ages, rheumatic heart disease is the ninth most important cause of death.

B. Between the ages of 5 to 19, it is the fourth most important cause in the United States. In Colorado it is the most common cause of death at these ages (except for accidents).

VII. *Means of Study*

A. Mortality rates.

B. Postmortems.

C. Notifications to Health Department (approximately two *new* cases of acute rheumatic fever should be reported per year per 1,000 persons under 16 years of age).

D. Special rheumatic clinics.

E. Hospital admission rates.

F. Study of special groups, as school children, college students, military personnel.

G. Industrial workers.

H. Sample communities.

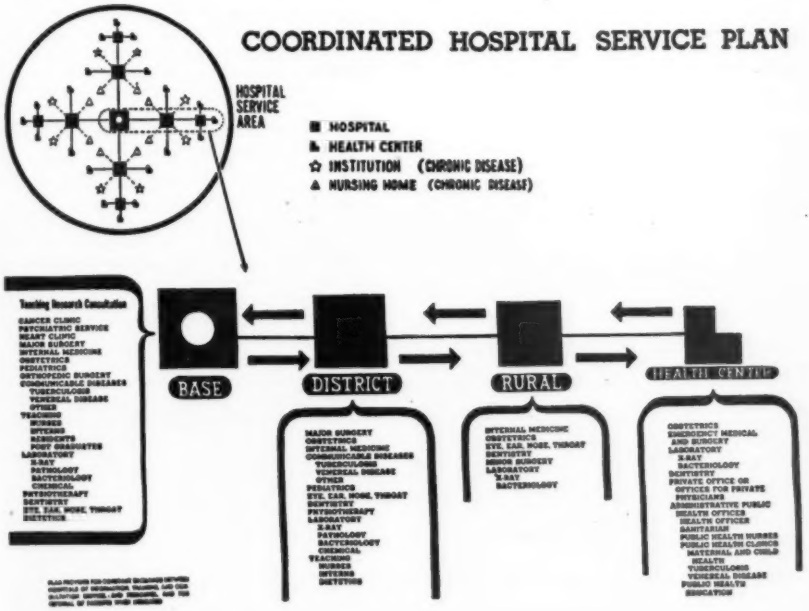
IX. *The Amount of Rheumatic Heart Disease Found Depends on the Method of Study Used*

If every child is examined by an interested physician who has special knowledge of rheumatic fever, 2/3 more cases will be discovered than by the usual hurried routine examination by the average physician. One-half of the whole group of rheumatic fever patients will not have been known previously.

Between the ages of 5 to 19 years, two per cent of children will have actual rheumatic heart disease and two per cent more will have potential or possible heart disease following rheumatic fever. The whole group should be under medical supervision; only one-half receive medical care today.

Hospital Service Plan

This illustration indicates the proposed network of health centers to be established in various portions of the United States. The plan is sponsored by the U. S. Public Health Service.



Editorial

Measles Prevention and Gamma Globulin

Measles is the most serious of the common exanthemata, next to smallpox. No form of active immunization has as yet proved wholly satisfactory, though progress in that direction has recently been reported. Passive immunization has been practiced for years, of course; convalescent or pooled adult serum, human placental extract, and now the gamma globulin fraction have all proved efficacious when properly administered. Any of these substances usually provides complete protection if given in adequate amounts within 4 days of exposure, or partial protection if given within 5 to 8 days.

When a measles-susceptible child already sick with some other disease comes in contact with a contagious case of measles—as in a hospital ward—it is wise to give him a large dose of some protective agent as soon as possible, in order to guard against an attack of measles becoming superimposed on the prior illness. Such passive protection is good for but 3 weeks, or less; re-exposure after that interval is an indication for repeating the injection of the protective substance.

On the other hand, when healthy susceptible youngsters are exposed, it is common practice to wait for 5 to 6 days after contact before administering the protective substance, in order to modify rather than to prevent the attack. In this latter circumstance, the belief is that an attenuated attack so produced—which usually comes on after a prolonged incubation period—will result in a permanent immunity against a further episode measles.

Gamma globulin is one of the important new extracts of normal human plasma developed at Harvard University in Dr. Cohn's laboratory in conjunction with the Army, Navy, Red Cross, and other governmental agencies. It contains, in concentrated form, those antibodies against measles presented by the sera of all individuals who have once had measles. Its great advantage lies in ready availability and ease of administration. Moreover, in the suggested dosage of 2 to 5 cc.—dependent upon age—it has proved more reliable and effective than pooled adult serum or immune globulin.

The present source of immune serum globulin is the blood contributed by our citizens through the American Red Cross. Serum albumin is being prepared in large quantities from these blood contributions; as a by-product of this processing, a surplus of immune gamma globulin is built up beyond the needs of the armed forces. The Red Cross has announced that this surplus will be returned to civilian use as far as is practicable. "State departments of health and those local health departments whose orders are approved by the Red Cross . . . may on request furnish immune serum globulin (normal serum gamma globulin [human] to any hospital within their jurisdiction) at the cost to them. This will not constitute a resale of the product. The cost shall not be passed on to the patient, either directly or indirectly."—I. J. WOLMAN, M.D.

✦

We should be very grateful to old age for taking away the desire to do what we ought not to do.—Cicero (at 62).

✦

Objective Tests of Cardiac Function Following Acute Coronary Occlusion

The difficult task of evaluating the patient's progress and of estimating his future course following an acute coronary occlusion may be materially assisted by the use of five objective tests of the cardiac state as has been pointed out by Master and his associates. These are briefly as follows:

1. Vital Capacity: There is a close relationship between vital capacity and pulmonary congestion due to left ventricular failure. Vital capacity is reduced in the majority of cases of acute coronary occlusion and the capacity rises progressively with clinical improvement. Vital capacity is not reduced when cardiac disability is due to angina pectoris, unless heart failure is present.

2. Exercise Tolerance Test (Master Two-Step Test): The effect on the blood

pressure and on the pulse of walking up and down two steps, each 9 in. high, is observed. The total number of climbs to be performed in 1½ minutes is determined from prepared tables based on sex, age and weight. Normally the pulse and the blood pressure return to within 10 points of the resting level within 2 minutes after exercise.

3. Heart Size (Teleoroentgenogram): There is some argument as to whether coronary sclerosis, or occlusion, can, in themselves, produce cardiac enlargement, or whether hypertension, or heart failure must also be present. Three-fifths of cases of coronary occlusion observed by Master, Dack and Jaffe presented cardiac enlargement, especially of the left ventricle, during the acute period of the attack, but the majority of these patients were hypertensive.

4. Ventricular Pulsations (Fluoroscopy and Roentgenogram): Myocardial infarction following acute coronary occlusion can be detected fluoroscopically in 50% of cases by the presence of a localized systolic expansion, or reversal of pulsation, on the left ventricular border usually along its lower half. 20% of cases of acute coronary occlusion show other abnormalities, for example, localized absence or diminution of the left ventricular pulsation.

5. Electrocardiogram. Classical changes in electrocardiographic records of the heart following acute coronary occlusion include negativity of the T wave, decrease in the size of the QRS complex and "early take off" of the T wave. Furthermore, occlusion of the left or the right coronary artery may be differentiated by characteristic variations in the electrocardiogram. The electrocardiographic pattern is determined by the myocardial infarction resulting from the occlusion and changes may appear during, immediately prior to, or up to seven or ten days following an attack of coronary occlusion. Subsequent alterations in the electrocardiogram toward a more normal appearance indicate healing and repair of the damaged heart muscle.—CAPT. C. D. MARPLE (M.C.)

✦

Treatment of Involutional Melancholia

In talking with Edgar Delehanty, Jr., M.D. of the Colorado State Hospital for the Insane at Pueblo, Colorado, I was informed on several points that are not brought out well in the literature.

The more serious cases of involutional melancholia in women do not respond to estrogenic hormone or to stilbestrol therapy, optimistic utterances by endocrinologists and pharmaceutical houses to the contrary.

Whenever treatment is not effective, one questions the accuracy of diagnosis in those who have reported success.

According to Dr. Delehanty, these symptoms are usually found in cases of involutional melancholia:

1. Depression
2. Retarded thinking
3. Feelings of unworthiness or that a sin has been committed. "Life is awful, useless."
4. The age group also helps in diagnosing involutional melancholia. Women between the ages of 35 and 50, and men between the ages of 50 and 60, are subject to such melancholia.
5. Worry and anxiety; usually appear in women. If involutional psychosis appears or paranoia, e.g. belief that they are being persecuted by their husband, the outlook is worse. The clinical picture resembles that of schizophrenia (dementia praecox) but the personality is better preserved.

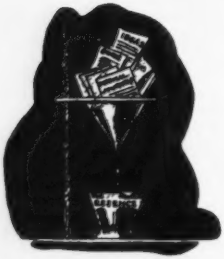
Effective Therapy

Electric shock therapy is almost specific in its cure of such patients. It not only returns them to the mental condition which existed prior to the onset of the melancholia, but often the relatives comment that the patient is mentally more healthy than he has been for three or four years or longer.

Such shock therapy has largely replaced that with insulin or metrazol. Apparently, new paths for association of ideas are formed.

I made the suggestion that a few patients with senile or arteriosclerotic mental symptoms be treated with electric shock therapy, to determine if mental senility is reversible and if new responses can be brought out. It is well known that an aged man who keeps active and informed does not tend to deteriorate mentally as rapidly as the person who withdraws more and more into himself. Yet if such a man retires and loses contact with the stimulation of new ideas and new persons, he deteriorates rapidly. Such mental decline in a short time is almost independent of anatomical changes which occur slowly.

(A differential diagnosis of depressions includes a. reactive depressions, which are abnormal reactions to some stimulus, such as loss of money and which tend to recur or altenate with manic states; b. Manic-depressive depressions usually occur in episodes and a previous history is obtained—R. L. GORRELL.



CLINICAL NOTES and ABSTRACTS

Molasses Enemas

The normal physiology of defecation would indicate 3 ounces as the normal daily evacuation from the patient in bed. To exceed this amount is to infringe on the normal bowel movement of the next day. A continuance of the use of the larger enemas or of the hit or miss laxatives also effectively upsets the normal daily bowel movement routine.

The use of 3 to 4 ounce enemas, starting with 50 percent molasses in water, dropping rapidly to 25 and 10 percent molasses as recovery occurs is advocated.

Molasses was chosen because: (1) It proved to be relatively nonirritant; (2) it is easily available; (3) it is cheaper than glycerin; (4) it is easily miscible in varying strengths; (5) it is not incompatible with any additional medicaments such as turpentine; (6) it is effective. Observations on 15,000 patients covering 25 years with 5,000 follow-up records has shown that 6 percent of the patients on the small enema give a history of rectal irritation or of faintness instead of the 33 percent on the haphazard soapsuds technic.—HICKS, E. S., observations regarding enemas. *Canad. M. A. J.* 51: 358-359, Oct. 1944.

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Composition of Whole Blood

Whole blood is actually a complex suspension of cellular elements in plasma. The cellular elements consist of the erythrocytes, leukocytes, and thrombocytes, while the plasma is a yellowish-tinted transparent fluid containing proteins, nonprotein nitrogenous substances, inorganic salts, gases, enzymes, and antibodies. The proteins in the plasma are serum albumin, globulin, and fibrinogen; the principal non-protein nitrogenous substances are urea, uric acid, creatinine, amino acids, and phosphatides; the nonnitrogenous organic compounds include dextrose, lipoids, and salts of lactic acid; the inorganic salts consist of compounds with sodium, potassium, calcium, and magnesium cations, and anions of chloride, bicarbonate, phosphate, and sulfate; among various types of antibodies are included antitoxins, precipitins, agglutinins, opsonins, bacteriolysins, and hemolysins.—TURNER, O. E.: Investigation of transfusion reactions. *Pa. M. J.* 47: 1071-1076, August 1944.

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Pre-Sternal Edema in Mumps

Pre-sternal edema is not a rare complication in mumps. The edematous tissues pit easily, and apparently this is due to obstruction of lymphatic drainage by the swollen glands. The edema begins shortly after the involvement of submaxillary glands and usually lasts 5 days.—GALLIS, S.S., and PETERS, M.: *Bull. Johns Hopkins Hosp.* 75: 241-250, Oct. 1944.

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Glycosuria in Meningitis

Spontaneous glycosuria occurs frequently at the onset of meningitis. It was encountered in meningitis caused by the meningococcus, the pneumococcus, the staphylococcus, the tubercle bacillus, and in one case in which the causative organism was not isolated. It was accompanied in many instances by ketosis, hyperglycemia and diminished tolerance to sugar. Glycosuria was transient, persisting beyond the third day in only three of the 16 cases studied. Coma with glycosuria and ketosis at the onset of meningitis may mask the signs of meningeal involvement, lead to a diagnosis of diabetic acidosis and cause serious or fatal delay in instituting appropriate treatment for the meningitis.—FERGUSON, F., and BARR, D., in *Ann. Int. Med.*, 21: 173-186, August 1944.

Clinical Uses of Diethylstilbestrol

Diethylstilbestrol is effective in ¼-1 mg. doses in treatment of *menopausal symptoms*. Improvement is rapid in patients with *senile vaginitis* following small doses of the drug, efficacy of which can be determined by testing the intravaginal pH with Nitrazine paper. Stilbestrol is effective in treatment of *gonorrheal vulvovaginitis* and *leukokraurosis* and is beneficial to patients with pruritis vulvae in daily 5 mg. doses which are gradually decreased when improvement is noted.

Menstrual headaches are relieved by intramuscular injection of extrogen in oil but are not affected by oral administration of stilbestrol; neither drug was effective in treatment of hypoplastic and hyperinvoluted uteri, or in involutionary insanity.

Daily administration of 5 mg. diethylstilbestrol for several days after delivery or in the weaning period will prevent breast engorgement. Administration of 10 mg. stilbestrol every evening effectively controlled Braxton-Hicks' contractions and was useful as an antiabortive measure administered until the threat of abortion was eliminated.

The drug is beneficial in *dysmenorrhea* given at the end of the menstrual period in 5 mg. doses each day for 20 days, in menometrorrhagia in 5-10 mg. doses daily for 20 days, and in similar dosage in treatment of premenopausal hemorrhage. Amount of nausea caused by stilbestrol administration is not influenced by size of dose; in general the drug is well tolerated.—J. D. GUESS, M.D., in *J. South Carolina M. Assn.*, Feb. 1944

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Treatment of Pemphigus

Treatment with extract of the adrenal cortex and massive doses of vitamin D (or dihydrotachysterol) gives improved results in the treatment of acute pemphigus vulgaris, pemphigus vegetans and chronic pemphigus vulgaris. Disappointing results follow such treatment for pemphigus foliaceus, pemphigus erythematosus and pemphigus conjunctivae.

The treatment tends to correct the reduction of sodium, chloride, calcium and protein encountered in such patients.—True adrenocortical extract is given in 20 cc. doses daily for 4 days, and then 5 to 10 cc. daily thereafter. Half of the daily dose is injected intravenously and half intramuscularly. 1,000 cc. of physiologic saline solution are given intravenously each day (or 10 Gm. of enteric coated salt tablets). Synthetic adrenal cortex extract (less effective) is given daily, with 3 cc. as the first dose and 1 or 2 cc. daily thereafter.

75,000 units of vitamin D (or 10 to 15 cc. of dihydrotachysterol) is given daily. —W. F. LEVER, M.D., Harvard Medical School, Boston, in *New Eng. J. Med.*, July 13, 1944.

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Psychiatric Disorders and the G. P.

The general practitioner should not think in psychiatric diagnostic terms, as they seem much more definite than they really are.

The general physician need only decide whether a major psychosis or a minor psychosis is present.

A major psychosis is one in which the personality is so disorganized that the person is no longer capable of managing his own affairs; brain tumor, senility, general paresis and other organic causes may be present.

A minor psychosis is a mental disorder in which a personality is at fault in a limited degree, and usually appears in the form of complaints, symptoms and poor ways of doing things, but which do not prevent the person from managing his own life; there is rarely an organic or physiological cause. They are more often the result of emotion or personality difficulties.—W. R. MILLER, M.D. in *Bull. Linn Co. (Iowa) M. S.*, April 1944.

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Goiter Versus Asthenia

Symptom or Sign	Toxic Goiter	Neuro-circulatory Asthenia
Nervousness	Yes	Yes
Weakness	Yes	Yes
Weight loss	Yes	Yes
Increased sweating	Yes	Yes
Sleeplessness	Yes	?
Tachycardia	Yes	Yes —
Tremor	++	+
B.M.R.	25 to 70	20 to 30
Cardiac output	Increased	Normal
Heat intolerance	Yes	No
Appetite	Increased	Normal or decreased
Attitude to activity	Desires	Avoids
Attitude to activity	Willing	Reluctant
Eye signs	+ or —	None
Goiter palpable	80 to 90%	No
Response to iodine	Yes	No

—W. H. COLE, M.D., in *Miss. Valley Med. J.*, Jan. 1944.

[The simplest test of a truly toxic goiter —does the patient's pulse remain at 100 while at rest and while sleeping?—ED.]

Penicillin in Pneumonia

Penicillin is an effective therapeutic agent in pneumonia of either the lobar or bronchial type when the etiologic agent is the pneumococcus, staphylococcus, hemolytic streptococcus, or a combination of these organisms. It is of doubtful value when the causative agent is a virus, tubercle bacillus of Friedlander's bacillus. — Commission for Pneumonia Control, the Medical Society of Pennsylvania. *Pa. M. J.* 48: 265-268, Dec. 1944

Every Physician Must Know Malaria

The treatment of acute malaria must be reviewed by every practitioner in America. Service personnel undergoing any change in manner of living, too much celebrating, injury, or even pregnancy, may experience a recurrence of malaria. *Deaths have occurred* in such persons where the disease was diagnosed late or received too little treatment by unfamiliar practitioners.—F. F. BRANCH, M.D., (Boston University) in *Bull. Am. Coll. Surg.*, June 1944.

Prevention of Talcum Powder Injury

Potassium bitartrate may be substituted for talcum in the powdering of surgical gloves. Experimentation shows that even when left freely in the peritoneal cavity it does not cause any reaction at the time or later. The damage caused by the ordinary talcum (1) peritoneal irritation, (2) foreign body reactions and (3) later peritoneal adhesions is well known. —D. C. RIORDAN, M.D., in *J.A.M.A.*, Jan. 29, 1944.

Protein Deficiency in Surgical Patients

Protein deficiency (hypoprotinemia) is frequently observed in patients with bleeding peptic ulcers, carcinomas of the gastrointestinal tract, bowel obstruction and intestinal fistulae.

Marked improvement in protein deficiency is noted after intensive therapy with blood, blood plasma and amino acids. Whole blood appeared to improve plasma proteins more than plasma. — K. A. MEYER, M.D., in *S.G.O.*, Feb. 1944. [Plasma and serum do *not* replace whole blood transfusions, as many physicians and surgeons seem to think. The more plasma that is given to an anemic patient, the more anemic he becomes, as his scanty red cells are diluted even further:—ED.]

Postoperative Pulmonary Atelectasis

Pulmonary atelectasis, due to decreased ventilation and inadequate bronchial drainage, is the most common complication of major abdominal and kidney surgery. It may largely be prevented by adequate preoperative tracheobronchial drainage, an anesthetic that interferes least with respiratory muscles, the Trendelenburg position during and immediately after operation, postponement of elective operations in the presence of an acute upper respiratory infection, frequent change of position during the first few postoperative days, and avoidance of atropine and hyoscine, which tend to dry secretions and make elimination more difficult.

Tracheobronchial drainage is the most important aspect of treatment, and in the reported cases, was accomplished by forced deep breathing, frequent forced change of position, and forced coughing with thoracic compression; the last frequently dislodged a bronchial plug. Inhalations of 5% CO_2 and 95% O_2 are helpful in stimulating coughing. Aspiration of the affected bronchus through a tracheal catheter or bronchoscope may be done if other measures fail.—J. M. MARSHALL, M.D., in *U.S. Nav. M. Bull.*, Mar. 1944.

Clinical Use of Oral Thermometers

The character of the rise of the mercury column in an oral thermometer under clinical conditions is different from that under laboratory conditions. In this study, thermometers marked with specific time designations "1 minute," "½ minute," and "60 seconds" were found to require about the same length of time for the instrument to reach equilibrium as thermometers with no time designations. Three minutes should be the minimum time interval allotted for an oral thermometer to reach equilibrium under ordinary conditions of use.—N. DENOSAQUO, M.D., in *J. Lab. Clin. Med.*, Feb. 1944.

Don't Remove Turbinates

The removal of turbinate bones, except in cases of malignancy, is condemned. If they are diseased or enlarged, they can be trimmed or reduced in size by resection of the laterial portion, but the vitally important mucosa must be preserved.—W. R. MCKENZIE, M.D., in *South. Med. J.*, Jan. 1944.

Cancer of the Colon: Diagnosis

1. Age: Over 40 years of age.

2. Occult blood and mucus passed from the rectum.

3. Alternating obstipation and diarrhea (spurious), where previous bowel action has been natural.

4. Low lying abdominal colic with, perhaps, visible peristalsis, both being aggravated soon and again late, in timing, after the daily quantum of food is taken.

5. Localized intestinal stasis and stenosis, with the exact situation determined by the barium enema and confirmed by radiography and true timing of bowel movements.

6. Early exploratory laparotomy for quick confirmatory diagnosis and speedy treatment—S. WATSON SMITH, M.D., Hampshire, England.

Perineorrhaphy Postpartum Versus Perineal Repair

During delivery not only frank tears and episiotomies but rectoceles, cystoceles, and cervico-uterine complications occur. In such instances perineorrhaphy instead of perineal repair is essential. The writer describes a technique in which he dissects the mucosa, isolates the levator ani muscles, and inserts levator sutures which are not tied. These procedures require only 7/8 minutes longer than perineal repair and may be accomplished while the obstetrician is waiting for separation of the placenta. The operative technique is discussed and illustrated.—L. DORSIN, M.D., in *Am. J. Surg.*, Mar. 1944.

The Raw Food Diet

A raw food diet, being low in sodium and high in potassium, is of therapeutic value in various diseases in which sodium chloride and water are retained. The diet has been used in subacute nephritis, chronic nephritis without edema, thrombophlebitis, and inflammatory disease of the liver. The diet was given also to patients with active rheumatic fever, subacute bacterial endocarditis, nephrosis, pneumonia, and catarrhal jaundice. The foods permitted include saltless white bread, orange juice, eggs, saltless butter, jelly, honey, orange marmalade, sugar, celery hearts, carrot, tomato, cucumber, lettuce, mayonnaise, fresh strawberries, grapefruit, fresh pineapple, and shelled almonds.—A. A. HOLBROOK, M.D., in *Ann. Internal Med.*, Mar. 1944.

Oophorectomy for Breast Cancer

The late results of radical operation for cancer of the breast in young women has been disappointing. When combined with bilateral oophorectomy, the mortality rate dropped from 55 percent to 5 percent. The neoplasm should be examined immediately after radical operation on the breast; if mucoid carcinoma is not present, oophorectomy should be carried out at once.—J. S. HORSLEY, M.D. in *Surgery*, April 1944.

A Critical Review of Gastroscopy

Gastroscopy is safe, easy and should be done more often. Use of small pillows for the head and anesthetic gargles benzoate-HCI of 3 diethylamino-2, with 4% cocaine or 5% Larocaine pamino-2-dimethyl-l-propanol) is preferred to more complicated techniques. Indications include gastritis, unexplained and persistent gastro-intestinal symptoms, unexplained gastro-intestinal hemorrhage, "gastric neurosis," gastric ulcers, carcinoma, polyposis, and so on. Absolute contraindications are esophageal obstruction and, probably, aortic aneurysm. Relative contraindications include esophageal varices, cardiac decompensation, marked debility, psychoneurosis, and uncooperative patients. Vision and safety are further increased by the omniangle feature and controllable flexibility of some instruments.—E. B. BENEDICT, M.D., *Bull. N. Y. Acad. Med.*, Mar. 1944.

Sterility Caused by Cervicitis

Cervical disease is the most common cause of sterility in women. It was found in 60 of 125 consecutive private patients examined because of sterility. Extensive actual cauterization of the cervix was the only therapy carried out in 32 of the 35 patients who returned for treatment. In addition 1 patient had a polypectomy and 1 received cervical dilation. This was done as the immediate procedure of choice. Twenty-five of those 34 patients became pregnant in 12 months or less following this simple conservative treatment of the obvious cervical disease; complete sterility studies were not carried out. This has resulted in 22 healthy living children and in 2 pregnancies now in the last trimester while this paper is being written. The eradication of cervical disease is an important phase of the treatment of sterility.—R. A. REIS, M.D., in *Wisconsin M. J.*, Mar. 1944.

THUMBNAIL THERAPEUTICS

Treatment of Myalgia

• A rapid, effective, and permanent cure of myalgia can be obtained by injections into the tender spots of 1 to 2 cc. of 1% procaine solution. (0.5 Gm of phenol to each 100 cc.) The result of a thorough and accurate injection is relief of pain, relaxation of the spastic muscle, and absence of tenderness when pressure is applied to the myalgic spot. —M. Good, *J.A.M.A.*, April 1943.

Gastrointestinal Sedative

• Gastric and intestinal irritation symptoms are readily relieved by equal parts of bismuth subnitrate and bismuth subcarbonate, in teaspoonful doses, given in one-fourth glass of water, thirty minutes before eating.—Moise D. Levy, M.D. in *South. M. J.*, Apr., 1941.

Treatment of Threatened Abortion

• The intramuscular injection of alpha tocopheral acetate (synthetic vitamin E) and the oral administration of natural tocopherols stopped 85 percent of threatened abortions. 200 mgs. of alpha tocopherol in peanut oil were injected at the onset of bleeding, and repeated daily until bleeding stopped. Natural tocopherols in 150 mg. doses was given each day until bleeding ceased. —W. Silbernagel, M.D. in *Ohio S.M.J.*, Aug. 1943.

Quieting the Stomach

• During digestion, gastric peristalsis is not as marked as during hunger. The stomach can be put at rest not by fasting but by frequent small meals.—S. A. Portis in *"Diseases of the Digestive System"* (Lea & Febiger, Publishers).

Blepharitis

• After thoroughly cleansing away the exudate with warm alkalinized water, and touching up the raw points with nitrate of silver, apply the following:

Olei Cadini	dr. ss
Olei Theobrome	
Petrolatum aa	oz. ss

—*E.E.N.T.M.*, Sept., 1943

Treatment of Enuresis

• Unless bed wetting is caused by some definite condition such as a cord lesion, vesical neck obstruction with residual urine or from a stone in the bladder, the most dependable treatment is dilation of the urethra with sounds or bougies. As with adults, meatotomy should be done when the meatus is small. This plan of treatment is employed for both boys and girls. The dilations are administered once a week and are usually the only treatment needed.

Occasionally in boys, instillation of 1 or 2 percent solution of silver nitrate into the deep urethra are given after the dilation is performed. In boys, 1 or 2 cc. of Intracaine are injected into the urethra before the sounds are introduced. —E. G. Ballenger, M.D., in *J.A.M.A.*, Nov. 6, 1944.

Sulfathiazole for Smallpox

• The administration of 25 to 30 Gm. of sulfathiazole daily resulted in general improvement, more prompt disappearance of the fever and inhibition or modification of pustulation.—A. W. D. Leishman, M.D. in *J. Royal Army Med. Corps* Feb., 1944.

Quinidine in Coronary Thrombosis

• The routine use of quinidine, in doses of 6 to 9 grains daily, prevents the occurrence of ventricular fibrillation and sudden death, in many cases of coronary thrombosis.—*Med. World*, (Lond.) June 30, 1944.

Sulfanilamide Prevention of Rheumatic Recurrences

• Small doses of sulfonamide (such as 5 to 10 gr. of sulfanilamide) should be taken daily, by patients with *rheumatic fever*, during the winter season (October to May) to prevent recurrences of the infection, and further heart damage. —A. E. Hansen, M.D. in *Journ.-Lancet*, May 1943.

Iodine for Goiter

• Too many physicians think that a goiter is an indication for iodine therapy. It is not a medical treatment for goiter. —Willard Bartlett, M.D., Sr.

DIAGNOSTIC POINTERS

Sore Throat

• 1. In every case in which there is a definite exudate, especially if fever is present, smears and cultures (aerobic and anerobic) should be carried out to learn which organism is present.

2. If symptoms of a sore throat do not subside in 48 hours, perform a white cell and differential count, red cell count and hemoglobin determination, to rule out infectious mononucleosis, agranulocytosis, leukemia and similar conditions.

3. An early diagnosis is essential in diphtheria cases.

4. Vincents organisms may normally be found around the teeth; innocuous spirochetes found in mouth secretions may resemble treponema pallidum on darkfield examination.

5. Retropharyngeal abscess may be missed because of the uniform displacement forward of the posterior pharyngeal wall. A lateral x-ray will show the amount of retropharyngeal swelling present.

6. Tender cervical lymph nodes may make a sore throat persist for weeks. —F. L. WEILLE, M.D., in *Med. Clin. N. Am.*, Sept., 1944.

Worry Decreases Sexual Response

• In states of well being and contentment, the parasympathetic nerves hold the upper hand, the pelvic viscera receive a maximal flow of blood and are easily stimulated. Fear and worry cause the blood to be shunted to the striated muscles; the irritability of the genital track and sexual desire are temporarily lost.—J. C. WHITE, M.D., in *"The Autonomic Nervous System."* (MacMillan Co.)

Pernicious Anemia With Gastric Cancer

• Annual x-ray examinations of the stomachs of pernicious anemia patients will disclose gastric carcinoma in 8 per cent and benign polyps in 7 per cent.—LEO RIGLER, M.D., in *J.A.M.A.*, June 9, 1945.

Rickets and Osteomalacia

• Rickets and osteomalacia are essentially the same pathologic condition. Rickets occur in infants between 4 and 16 years and osteomalacia in adults.—R. S. BROMER, M.D., *in Minn. Med.*, Nov. 1944.

Active Duodenal Ulcer

• The presence of an active duodenal ulcer is indicated by:

1. A recent history of characteristic type of pain, punctual in timing and relieved by food, vomiting or adequate antacid therapy. Periodic exacerbations are frequent.

2. Finding free hydrochloric acid in the gastric content and the presence of an ulcer crater.

3. A duodenal deformity, if gallbladder disease is excluded, free hydrochloric acid is present and the patients symptoms are typical.—F. R. HOOK, M.D., *Naval Med. Bull.*, March, 1945.

Back Pain From Breast Cancer

• Back pain may be the first symptom of metastasis from breast cancer. This pain may be sharp and exactly resemble lumbago or sacro-iliac sprain.—T. D. COHN, M.D., in *New Eng. J. Med.*, Nov. 22, 1945.

Stammering

• When put under unusual emotional stress, almost anyone stammers (stutters is a synonym). Arising to address an audience is enough to make many normal speakers stammer for a few moments, "until they get warmed up."

Stammerers are people who habitually hesitate and stick in their speech under stress, but who can talk or read without hesitation when alone and relaxed. The trouble seems to be iff the patient's social relations. He is "shy," cannot "put it over," is afraid to meet people, has varied anxieties and especially has become fearful that he will stammer if called upon to speak.

For these reasons stammering is thought to be a neurosis.—STANLEY COBB, M.D. in *"Borderlands of Psychiatry"* (Harvard University Monograph).

Constipation and Hypothyroidism

• Constipation may be the only sign of hypothyroidism.—H. GAUSS.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE, Waukegan, Ill., is accompanied by a check for the published price of the book.

X-RAY EXAMINATION OF THE STOMACH

Templeton

X-RAY EXAMINATION OF THE STOMACH. *By Frederic E. Templeton, M.D., Head of the Department of Roentgenology, The Cleveland Clinic. — The University of Chicago Press, 1944. Price $10.00.*

This is an excellent book. Confined to the study of the esophagus, stomach and first part of the duodenum, it is not just another work on the technique of examination and the interpretation of the findings in these organs. The author does present an improved filming fluoroscope with detailed technique for fluoroscopic and film examination but what sets the book apart is the anatomical and physiological basis for film interpretation, and the close correlation of the abnormal roentgenological findings with the esophagoscopic and gastroscopic observations and the pathological or autopsy report.

The style of the book is almost conversational, is very readable and easily understood. It should be of interest to anyone who is concerned with the diagnosis and therapy of gastrointestinal conditions.—H. C.

DISEASES OF THE DIGESTIVE SYSTEM

Portis

DISEASES OF THE DIGESTIVE SYSTEM. *Edited by Sidney A. Portis, B.S., M.D., F.A.C.P., Associate Professor of Medicine, University of Illinois Medical School (Rush), etc. Second Edition. 1944. Philadelphia: Lea & Febiger. $11.00.*

Fifty contributors, each well known in their own field, contribute sections to this one volume system on gastroenterology.

The material is accurate, lengthy, well documented and fairly complete. Preceding each organ is a discussion of its physiology.

The general practitioner will find that the material is too lengthy for his use in practice. A chapter devoted to a brief discussion of each type of patient in the field of gastroenterology, tells which cases should be managed by the general physician, which by the internist and which can be mutually diagnosed and treated, what mistakes are likely to be made in diagnosis and treatment, where in the almost one thousand pages of text one can find quickly those points he wishes to learn, would be of real value.

One wishes that definite statements were made first, then conflicting views expressed. For example, in considering massive hemorrhage from a peptic ulcer, 750 controversial words are used in considering whether or not to operate, yet no mention is made of other treatment. In most sections of the counry, it is difficult to find a surgeon competent enough to manage duodenal bleeding satisfactorily, yet no mention is made of continuous transfusions or other measures to keep the patient alive.—R. L. Gorrell.

CLINICAL CASE-TAKING

CLINICAL CASE-TAKING: Guides for the Study of Patients; History Taking and Physical Examination or Semiology of Disease in the Various Systems. *By George R. Herrmann, M.D., Ph.D., Professor of Medicine, University of Texas, Galveston. St. Louis: C. V. Mosby Company. 1945. $1.75.*

This slim manual presents an orderly procedure for taking a complete history on patients under study, pertinent points to be found on physical examination which are diagnostic, questions to be asked when diseases of each system are suspected, and the significance of various symptoms.

It is of real value to students and internes. The man in practice who has become slipshod in taking histories will find it stimulating.

Its tone is dogmatic, a fault that probably cannot be avoided in student's texts. To certain statements, definite exception should be taken: 1. The biophotometeric reading is *not* diagnostic of vitamin A deficiency; 2. One should not make a diagnosis of a neurosis by exclusion; 3. It is wrong to suggest that one should rule out organic disease by examination (assuming that all early and incipient diseases can be so diagnosed) and only then to consider psychoneurosis, as this diagnosis can be made on definite symptoms; also, such patients often have organic disease; 4. Edema of the legs is frequently due to varicose veins, a cause not mentioned.—Ralph L. Gorrell, M.D.

NEW GOALS FOR OLD AGE

Lawton

NEW GOALS FOR OLD AGE. *Edited by George Lawton. Columbia University Press; New York: Morningside Heights. 1944. $2.75.*

This is the human side of geriatrics, of senescence. Here is none of the dry, measuring of loss of one physiologic function and one anatomic component after another. This is the living stuff of which life is really made; what people can do to make themselves happier and the world better, how they can adjust to changing social scenes, how occupational and work therapy can be of value, how to preserve mental abilities in older persons, how books may be used, how the older

person may live in an institution or in a community.

Not the least interesting chapter is that by a woman of 75 who writes freely, frankly and charmingly "How It Feels To Be Seventy-Five."—R. L. Gorrell.

PATIENTS HAVE FAMILIES

Richardson

PATIENTS HAVE FAMILIES. *By Henry B. Richardson, M.D., F.A.C.P., Associate Professor of Clinical Medicine, Cornell University Medical College, New York City, et cetera. New York: The Commonwealth Fund. 1945. $3.00.*

This is a brilliant enlargement on the author's previous studies on the patient as a person, as contrasted to the all too prevalent attitude which considers him the possessor of hypertension, gastric ulcer or other "organic" disease.

Here the patient is considered as a part of a family group, both being affected by the other; the reactions of the patient being changed or modified by family attitudes, so that clinical problems are not understood until the whole picture is grasped.

The general practitioner, the pediatrician, the internist, and less commonly, the other specialists, will improve their diagnostic accuracy, their therapeutic results and their feeling of accomplishments, if they make the knowledge in this book a part of their daily practice.—R. L. Gorrell.

PATHOLOGY OF LABOR, PUERPERIUM AND THE NEW-BORN

McCormick

A TEXTBOOK ON PATHOLOGY OF LABOR, THE PUERPERIUM AND THE NEWBORN. *By Charles O. McCormick, A.B., M.D., F.A.C.S., Clinical Professor of Obstetrics, Indiana University School of Medicine; Consulting Obstetrician, Coleman Hospital for Women, Indianapolis City Hospital and Sunny Side Sanitarium. 191 illustrations, 10 in color. St. Louis: The C V. Mosby Company. 1944. $7.50.*

This is a *clinical* rather than a pathologic text, as one might think from the title. It presents the various causes of abnormal labor, diagnostic methods and treatment to be employed. It is written in a brief, fact-filled style which tells the physician what the condition is and what to do about it. Many excellent illustrations are included.

THE MERCK MANUAL

THE MERCK MANUAL: Therapeutics and Materia Medica. *Seventh Edition. Sept. 1944. Merck & Company, Rahway, New Jersey. $2.00.*

An extremely handy volume which contains alphabetically listed diseases with their essential points on etiology, diagnosis, complications, prophylactic and actual treatment. Many worthwhile drugs and prescriptions are mentioned.

TECHNIQUE FOR LIVING

Smith-Rambova

TECHNIQUE FOR LIVING. *By James H. Smith and Natacha Rambova. Essential Books, New York. 1944. Price $1.50.*

This modest little book presents many ideas that are of real value to the person who wishes to use his mental energies constructively and his physicial body more effectively. The material on mental relaxation is especially needed by harassed physicians.

MEDICAL GYNECOLOGY

Janney

MEDICAL GYNECOLOGY. *By James C. Janney, M.D., F.A.C.S., Assistant Professor of Gynecology, Boston University School of Medicine, Boston Philadelphia and London: W. B. Saunders Company, 1945. $5.00.*

This book is designed for the man in practice. It considers each symptom that the gynecologic patient may complain of, each physical finding that may be discovered on examination, tests and examinations, gynecologic treatment and socio-medical problems. The author is frank, interesting and well informed. His remarks on sexual problems are of practical value.

AN OUTLINE OF TROPICAL MEDICINE

Saphir

AN OUTLINE OF TROPICAL MEDICINE. *By Otto Saphir, M.D., Director of Pathology, Michael Reese Hospital, Chicago. The Michael Reese Research Foundation: Chicago, 1944. $1.00.*

The author describes it as an "extended vocabulary of Tropical Medicine." There is no apparent reason for extending this pamphlet, which is too brief to be informative and whose material is not original.—R.L.G.

THE NEW-BORN INFANT

Stone

THE NEW-BORN INFANT: A Manual of Obstetrical Pediatrics. *By Emerson L. Stone, M.D., Associate Clinical Professor of Obstetrics and Gynecology, Yale School of Medicine. Third Edition, revised. 1945. $3.00.*

There is little material on this most important phase of the child's life, the two weeks immediately following delivery, in obstetrical literature, and yet a living, healthy baby is the sole reason for the pregnancy. The information in this book is complete on management of this period. If better organized and subdivided, the practicing physician could refer more readily to various points.

PROTEINS AND AMINO ACIDS

PROTEINS AND AMINO ACIDS: Physiology, *Pathology, Therapeutics. Yonkers 1, New York: The Arlington Chemical Company. Sent Without Charge to Any Licensed Physician.*

A comprehensive review of the literature on the metabolism of proteins, the abnormal physiologic and pathologic states concerned with protein deficiency, and their therapy. The condensation is well done. It would be livelier and easier to remember if it were illustrated, as see *Clinical Medicine's* pictorial section on capillary circulation. (May 1945).—

HEALTH INSTRUCTION YEARBOOK

Byrd

HEALTH INSTRUCTION YEARBOOK. *1944 Compiled by Oliver E. Byrd, Ed. D. Associate Professor of Hygiene and Director, Division of Health Education, School of Health, Stanford University. Foreword by C. Morley Sellery, M.D. President, American School Health Association. Stanford University Press, Stanford University, California, London Humphrey Milford, Oxford University Press. Price $3.00.*

A valuable compilation of abstracts taken from public health, medical and allied scientific journals of 1944 and 1943. More physicians should study *health*, as well as disease. —R.L.G.

BODY POISE

Truslow

BODY POISE *by Walter Truslow, M.D., F.A.C.S. The Williams & Wilkins Company, 1943. Price $4.50.*

Devoted to the analysis, development and correction of posture or body poise, this monograph will interest alike the orthopedic surgeon, general practitioner, and educator who are concerned with efficient, graceful and pain-free body carriage.

Part one presents a thorough analysis of the fundamental standing position from feet to head with attention to the ligaments and muscle actions around each joint. Part two presents practical suggestions for the care and correction of weak feet, flat feet, and metatarsalgia, and for the correction of anteroposterior, lateral, and rotary curvatures of the spine. Corrective exercises for each condition, many of them original with the author, are well illustrated. Foot exercises in the sitting position with weight off the feet are favored.

In part three a number of leading sports are analyzed kinesiologically and critically evaluated for their effect on posture. Sports such as golf and baseball that contribute to one-sided development are not condemned but other sports and special exercises are suggested to offset their one-sidedness thus preventing or correcting their tendency to produce lateral deviations.

The author's theme song "Systematic Gymnastics plays a Leading Role in the Maintenance of Good Posture and Corrective Gymnastics in the Restoration of Good Body Poise," is sung on every page. It strikes the keynote for exercise to guide normal growing children to good posture as well as for exercises to supplement strictly orthopedic measures, ranging from food pads to plaster jackets.

The author employs the self-confident style of the widely experienced clinician. Some readers may wish for more objectively secured supporting data and critical analyses of results.—Arthur H. Steinhaus.

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NEUROLOGICAL DIAGNOSIS

Spurling

PRACTICAL NEUROLOGICAL DIAGNOSIS *by R. Glen Spurling, M.D., Clinical Professor of Surgery (Neurosurgery) University of Louisville School of Medicine, (On Leave of Absence).—Charles C. Thomas, 1944. Price $4.00.*

A compact manual on neurologic anatomy, clinical tests and neurologic diagnosis which is ideal for the medical student. The average practitioner will not find it readily digestible, however.

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SYMPTOMS OF VISCERAL DISEASE

Pottenger

SYMPTOMS OF VISCERAL DISEASE *by Francis Marion Pottenger, A.M., M.D., LL.D., F.A.C.P., Medical Director, Pottenger Sanatorium and Clinic for Diseases of the Chest, Monrovia, California. C. V. Mosby Company, 1944. Price $5.00.*

This is a well-written book, but is rather difficult to understand without thorough study, and that makes it rather hard reading. The author emphasizes to a considerable extent the importance of physical examination over laboratory study. In his review, he points to the relationship of the functions of the body to sympathetic control and also to the function of the glands of internal secretion in this important aspect of visceral signs and symptoms. He analyzes, in a general way, how the sympathetic nervous system may influence these functions of internal metabolism, first by changing the concentration of the electrolytic factors and thereby modifying the permeability of the cell membranes. He feels that the sympathetic nervous system, tone, so to speak, may be a factor in the anabolic and catabolic processes of cell function.

The chapter on Physiology of the Vegetative Nervous System is well worthy of review by all physicians. The function and the relationship to the external responses of the body is not well understood. His interpretation and outline, I believe, form a well-organized and logical thought relationship. When the pharmacological differentiation is pointed out, the so-called "vagatonic" and the sympathetic factors are those that are commonly recognized in general medicine. The influence of the sympathetic factor on the relation of the ionic content and physical state of the cell, cell activity and nerve stimulation is a thought that is extremely important in our analysis of physiology. Too little is known about this factor in the disease. It seems that although there are certain points, perhaps at issue, this chapter emphasizes a phase of medicine which is too poorly covered in the general line of clinical thought.—W.B.K.

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DISEASES OF THE SKIN

Ormsby & Montgomery

DISEASES OF THE SKIN *by Oliver S. Ormsby, M.D. and Hamilton Montgomery, M.D., M.S. Sixth edition, revised.—Lea and Febiger, Price $10.00.*

This is a useable text for the general practitioner as well as the skin specialist.

Introductory material outlines the basic anatomy of the skin, general etiology and pathology, diagnosis, prognosis and therapeutics and the treatment of skin disease. The remainder of the book discusses the diseases of the skin under classes.

There are 723 illustrations and 6 colored plates. They are a valuable addition to the written material. The arrangement of diseases by classes enable the general practitioner to start on his differential diagnosis.

This is a readable and practical skin book which should dispel some of the feeling that the practice of dermatology is merely observation and conversation.—J. W.

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FUNCTION OF THE ORGASM

Reich

FUNCTION OF THE ORGASM. *By Wilhelm Reich, M.D. Translated from the German manuscript by Theodore P. Wolf.—Orgone Institute Press, Price $3.00.*

The book is partially a rehash of Freud's "Libido Concept" with a too detailed account of the authors own private war with Freud on certain minor differences in their private psychoanalytic opinions.

It is largely a philosophical text in which the author attributes all human behavior from bed-wetting to Fascistic irrationalism on the cultural inhibition of the need for orgastic release.

Some new and important material is added to Psychosomatic research. The author's discovery of "orgone energy" requires much clarification and confirmation.

The text is definitely psychoanalytical and would not appeal except in that esoteric field. —Psychiatrist E. D. J.